

INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT NO. 3580

BOSTON AND ALBANY RAILROAD COMPANY

IN RE ACCIDENT

NEAR EAST CHATHAM, N. Y., ON

MAY 30, 1954

SUMMARY

Date: May 30, 1954

Railroad: Boston and Albany

Location: East Chatham, N. Y.

Kind of accident: Derailment

Train involved: Passenger

Train number: 11

Engine number: Diesel-electric units 8220 and 8215

Consist: 6 cars

Speed: 49 m. p. h.

Operation: Signal indications

Tracks: Double; tangent; 0.79 percent descending grade westward

Weather: Clear

Time: 8:50 p. m.

Casualties: 19 injured

Cause: Broken rail

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3580

IN THE MATTER OF MAKING ACCIDENT INVESTIGATION REPORTS
UNDER THE ACCIDENT REPORTS ACT OF MAY 6, 1910.

BOSTON AND ALBANY RAILROAD COMPANY

July 29, 1954

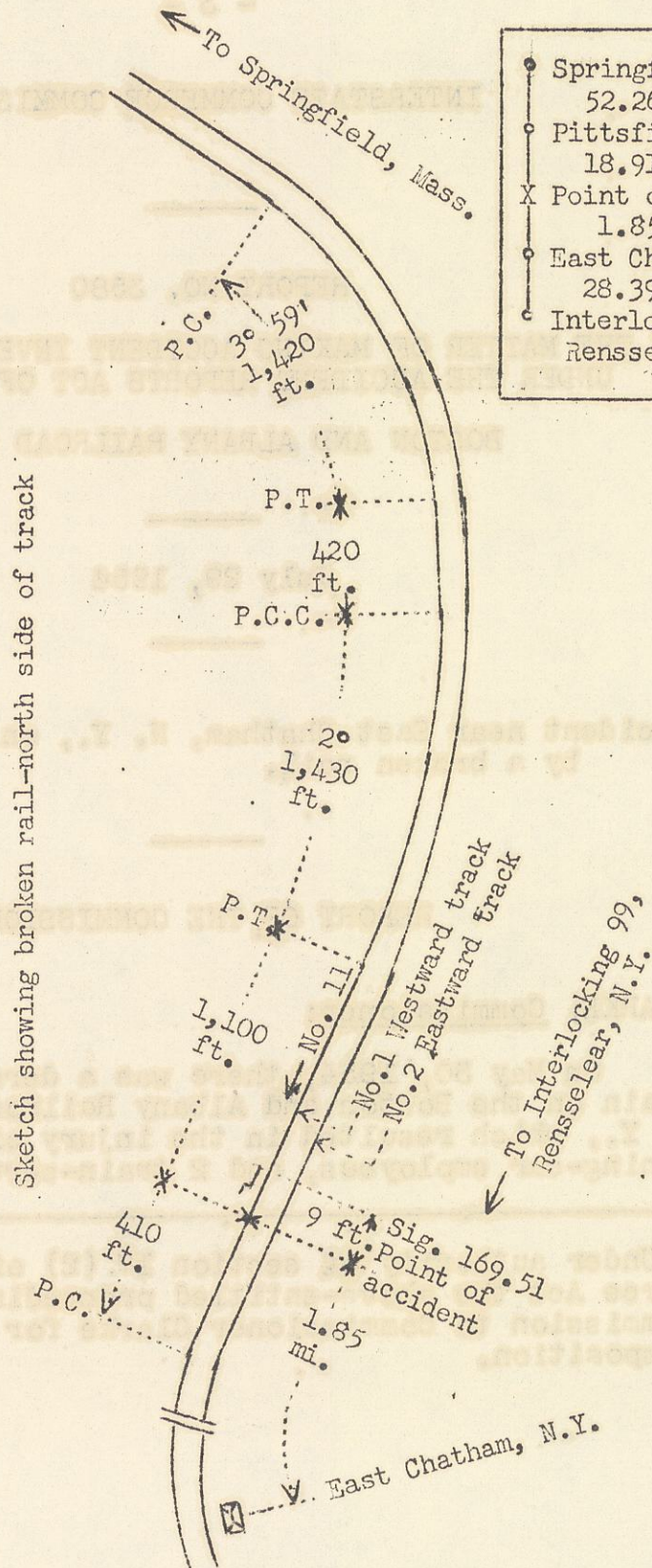
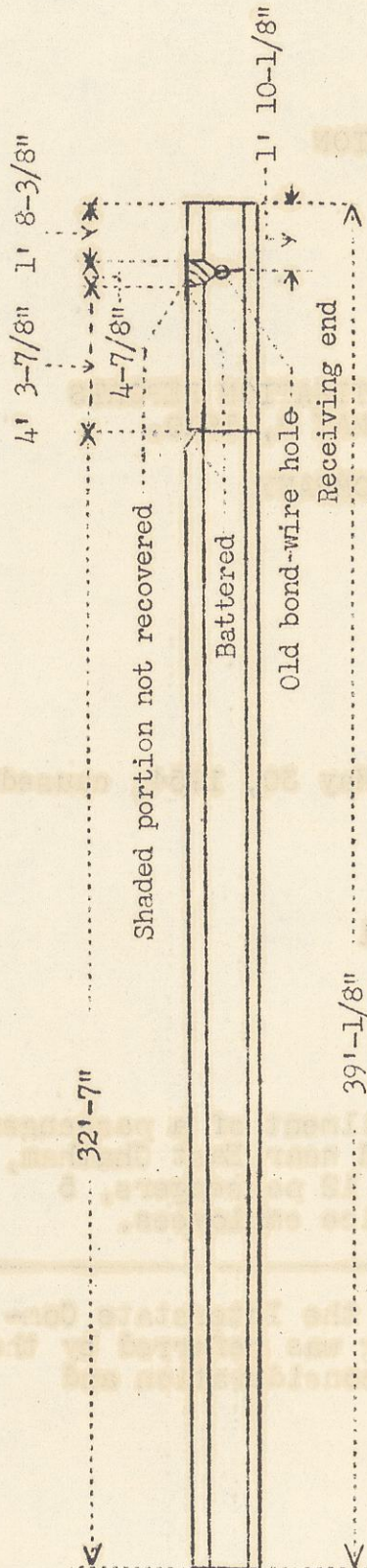
Accident near East Chatham, N. Y., on May 30, 1954, caused
by a broken rail.

REPORT OF THE COMMISSION¹

CLARKE, Commissioner:

On May 30, 1954, there was a derailment of a passenger train on the Boston and Albany Railroad near East Chatham, N. Y., which resulted in the injury of 12 passengers, 5 dining-car employees, and 2 train-service employees.

¹ Under authority of section 17. (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Clarke for consideration and disposition.



Report No. 3580
 Boston and Albany Railroad
 East Chatham, N.Y.
 May 31, 1954

Location of Accident and Method of Operation

This accident occurred on that part of the railroad extending between Springfield, Mass., and Interlocking 99, Rensselaer, N. Y., 101.41 miles. In the vicinity of the point of accident this is a double-track line, over which trains moving with the current of traffic are operated by signal indications supplemented by an intermittent inductive train-stop system. The main tracks from north to south are designated as No. 1, westward, No. 2, eastward. The accident occurred on track No. 1 at a point 71.17 miles west of Springfield and 1.85 miles east of the station at East Chatham, N. Y. From the east on track No. 1 there are, in succession, a $3^{\circ}59'$ curve to the right 1,420 feet in length, a tangent 420 feet, a compound curve to the right, having a maximum curvature of 2° , approximately 1,430 feet, and a tangent 1,100 feet to the point of accident and 410 feet westward. The grade is 0.79 percent descending westward at the point of accident.

The track structure consists of 127-pound rail, 39 feet in length, laid new in 1934 on an average of 24 treated ties to the rail length. It is fully tieplated with single-shoulder tieplates and is spiked with two spikes per tieplate. It is provided with 6-hole 36-inch joint bars and an average of 12 rail anchors per rail. It is ballasted with crushed trap rock to a depth of 12 inches below the bottoms of the ties.

Automatic signal 169.51, governing west-bound movements on track No. 1, is located 9 feet east of the point of accident.

The maximum authorized speed for passenger trains in the vicinity of the point of accident is 60 miles per hour.

Description of Accident

No. 11, a west-bound first-class passenger train, consisted of Diesel-electric units 8220 and 8215, coupled in multiple-unit control, one baggage-passenger car, one coach, one dining car, and three sleeping cars, in the order named. The first three cars were of conventional all-steel construction, and the other cars were of lightweight steel construction. The rear three cars were equipped with tightlock couplers. This train departed from Springfield at 6:55 p. m., on time, departed from Pittsfield, 18.91 miles east of the point of accident, the last open office, at 8:18 p. m., on

time, and while moving at a speed of 49 miles per hour the rear four cars were derailed at a point 1.85 miles east of the station at East Chatham.

A separation occurred between the second and third cars as a result of a broken knuckle at the front end of the third car. The forward portion of the train stopped with the front end of the locomotive approximately 1,300 feet west of the point of derailment. The derailed cars remained coupled and stopped with the front end of the third car 597 feet west of the point of derailment. The third car stopped upright and approximately in line with the track. The fourth car stopped with the rear end 5 feet north of the center-line of the track; it leaned toward the north at an angle of about 20 degrees. The fifth car stopped with the front and rear ends, respectively, 5 feet and 8 feet north of the center-line of the track; it leaned toward the north at an angle of about 40 degrees. The rear car stopped upright, approximately 9 feet north of the center-line of the track and parallel to it. The third car was slightly damaged, and the other derailed cars were somewhat damaged.

The conductor and the front brakeman were injured.

The weather was clear at the time of the accident, which occurred about 8:50 p. m.

Discussion

As No. 11 was approaching the point where the accident occurred the speed was 49 miles per hour, as indicated by the tape of the speed recording device. The headlight was lighted brightly. The enginemen were maintaining a lookout ahead from the control compartment at the front of the locomotive. The members of the train crew were in various locations in the cars of the train. Signal 169.51 indicated Proceed. The enginemen said they heard a slight metallic clicking sound as the locomotive passed the signal but they noticed no irregularity in the surface of the track. Several seconds later the brakes became applied in emergency. The baggageman, who was in the first car, said that immediately before the brakes were applied he felt a series of irregular movements as the car passed over a rough spot in the track. The front brakeman, who was in the second car, said he heard the wheels of the first car strike an irregularity in the track. When the second car struck the irregularity it lurched violently several times, and the front brakeman made an emergency application of the brakes by use of the conductor's valve.

Examination of the locomotive and the cars after the accident occurred disclosed no condition which could have caused or contributed to the cause of the accident. Examination of the track disclosed no indication of dragging equipment nor of an obstruction having been on the track.

After the accident occurred a broken rail was found in the north side of track No. 1. This rail, which bore heat number PW-4365-A, was manufactured by the Bethlehem Steel Company, Lackawanna Plant, in June 1934. It was broken into several pieces, three of which were recovered. Fractures occurred at points, respectively, 1 foot 8-3/8 inches, 2 feet 1-1/4 inches, and 6 feet 5-1/8 inches west of the receiving end of the rail. The first fracture occurred between tie locations. It extended downward through the base of the rail from an old bond-wire hole in the web 1 foot 10-1/8 inches west of the receiving end of the rail, and diagonally upward from the bond-wire hold and through the head at a point 1 foot 8-3/8 inches from the end of the rail. The second fracture extended diagonally upward from the bond-wire hole and through the head of the rail at a point 4-7/8 inches west of the first fracture. The third fracture was a vertical break which extended through the head, web, and base of the rail. Examination of the rail disclosed that prior to the time of the accident transverse fissures had existed at the points where the first and third breaks occurred. These fissures, which did not extend to the surface, covered 60 percent and 10 percent, respectively, of the cross-sectional area of the head. The triangular portion of the rail between the first and second fractures was not recovered. The portion of rail between the second and third fractures was dislodged from the track and was found approximately 200 feet west of its original location. The east ends of both this portion of rail and the portion immediately west of it were battered. Apparently after the first break occurred the broken end was struck by the wheels of a west-bound train with sufficient force to cause the other breaks. The derailment occurred after a section of the rail was dislodged as the forward portion of No. 11 was passing over it.

A rail-defect detector car was last operated over this territory on April 16, 1954. At that time no defective condition of the rail involved was found. The track in the vicinity of the point of accident was last inspected by a track patrol

foreman from a track motor-car three days before the accident occurred. No defective condition was observed. A west-bound freight train passed over the point of derailment about 40 minutes before the accident occurred. Members of the crew observed no unusual condition of the track.

Cause

This accident was caused by a broken rail.

Dated at Washington, D. C., this twenty-ninth day of July, 1954.

By the Commission, Commissioner Clarke.

(SEAL)

GEORGE W. LAIRD,

Secretary.